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CZECHOSLOVAK GOVERNMENT ANNOUNCES COMPETITION FOR NEW INVENTIONS

Prace
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The Czechoslovak Bureau for Inventions and Innovations (Urad pro vynalezu a zlepšovaci návrhy) recently announced a competition for solutions to important technical problems, to run from 1 February 1954 through 31 July 1954. The competition is open to all interested persons, regardless of professional background and current occupation. Cash prizes will be awarded for the three best ideas for the solution to each problem. All proposed solutions must be submitted in duplicate. The following are some of the problems:

The Ministry of Metallurgy and Ore Mines is interested in a solution to the problem of the economical operation of blast furnaces with semiacid slags. Setting the ratio of CaO to SiO_2 at less than 0.95, the following results are desired: the manganese yield must not fall below 50 percent, the silicon content in raw iron must not exceed 0.6 percent, and the sulfur content must not exceed 0.08 percent. First prize, 5,000 crowns; second prize, 3,000 crowns; and third prize, 2,000 crowns.

The ministry is also interested in an electric drill with sufficient pressure to drill through the hardest rock formations. Such a drill should be equipped with a dust suction device or a washing device. First prize, 5,000 crowns; second prize, 3,000 crowns; and third prize, 2,000 crowns.

The Ministry of Agriculture is in need of a mechanical cutter for sugarbeet leaves, to be cut either before or after lifting. It also needs a simple automatic machine for loading manure. Such a machine should be operated with a minimum of human supervision and should have a low electric power consumption. The machine should be able to lift about 100-150 kilograms of manure at a time. The ministry is also interested in a machine for the automatic unloading and transloading of potatoes, complete with an automatic sacking scale. Prizes to be awarded for the beet cutter, the manure loader, and the potato loader are as follows: first prize, 5,000 crowns; second prize, 3,000 crowns; and third prize, 1,000 crowns.

Another item of interest is a potato sorter which will not require human supervision and which can be mounted on the potato lifter. First prize, 4,000 crowns; second prize, 2,000 crowns; and third prize, 1,000 crowns.

The Construction Industry Ministry is interested in increasing the output of rotary cement kilns and also in solving problems of prefabrication with respect to heat engineering, in cases where hygienic conditions must be considered. First prize, 5,000 crowns; second prize, 3,000 crowns; and third prize, 2,000 crowns.

The Ministry of Communications is in need of a single, mobile machine for automatically extracting old utility poles from the ground. The ministry also needs a tool for the automatic cutting of grooves in walls in preparation for installing electrical wiring and gas or water pipes. Such a tool should be light, easily movable, and easy to operate, and should be usable at any point on the wall. First prize, 5,000 crowns; second prize, 3,000 crowns, and third prize, 2,000 crowns.

The Ministry of Fuel and Power wishes to solve the problem of clearing areas [simply moving rock, etc., and waste?] in quarries by means of a conveyer belt and hydromechanization. First prize, 5,000 crowns; second prize, 3,000 crowns; third prize, 2,000 crowns.

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The ministry is also seeking to acquire an automatic shoring device.

The Ministry of Light Indust. is interested in a flax-rinsing machine. The details for such a project can be obtained from the Inventions and Innovations Section of the ministry. First prize, 2,000 crowns; second prize, 1,000 crowns, and third prize, 500 crowns.

The ministry is also interested in solving the problems connected with the manufacture of glass chalices. Details for the project may be obtained from the Research Institute for the Mechanization of the Glass Industry (Vyzkumny ustav pro mechanisaci prumyslu skla), Prague VII, Jatečni 23. First prize, 3,000 crowns; second prize 2,000 crowns; and third prize, 1,000 crowns.

The Ministry of the Chemical Industry wishes to solve the problem of utilizing waste lye left over after dialysis, and also of utilizing gases with low SO₂ content. First prize, 4,000 crowns; second prize, 3,000 crowns; and third prize, 2,000 crowns.

Several other ministries [not named] are interested in solutions to the following problems: A machine to prepare the soil for hill planting of forest trees; a new caterpillar tractor for hauling forest logs; a mechanical device for increasing cleanliness in railroad cars and buses; a method for manufacturing worm, helical, and hypoid gears on conical wheels; the development of a substitute material for tin foil, to be used by the food industry, a mechanical beet unloader; a new beer bottle top; a cork substitute for use as bottle stoppers; the mechanization of shaping and wrapping butter in small retail quantities; achieving of stability of characteristics of centrifugal pumps and steam turbines; and improvement of the manufacture of turbine blades.

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